

A Cyclic Variant of the Erdős-Szekeres Theorem

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I will discuss the Erdős-Szekeres Theorem, which states that every linear permutation of size at least $rs + 1$ contains either an increasing subsequence of length $r + 1$ or a decreasing subsequence of length $s + 1$ or both. Then, I will give a proof of a cyclic variant of this theorem, which states that every cyclic permutation of size at least $rs + 2$ contains either an increasing subsequence of length $r + 2$ or a decreasing subsequence of length $s + 2$ or both.

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